

CLAIMS

I claim:

1. A method for accessing hardware I/O control  
5 blocks, which are stored in an hardware I/O control  
block array, by a parallel SCSI host adapter, said  
method comprising:  
    addressing one page in a plurality of pages  
    of said hardware I/O control block array for said  
10 parallel SCSI host adapter using a first portion  
of a hardware I/O control block array pointer in  
said parallel SCSI host adapter wherein said one  
page includes a plurality of storage sites for  
hardware I/O control blocks; and  
15      addressing a hardware I/O control block  
stored in said one page using a second portion of  
said hardware I/O control block array pointer in  
said parallel SCSI host adapter.
- 20      2. The method of Claim 1 wherein said addressing  
a hardware I/O control block stored in said one page  
further comprises:  
    using a tag supplied by a reconnecting SCSI  
25 target as said second portion.
3. The method of Claim 1 further comprising:  
    storing a reconnecting target address by said  
parallel SCSI host adapter.
- 30      4. The method of Claim 3 further comprising:  
    comparing a target address stored in said  
hardware I/O control block with said reconnecting  
target address.
- 35      5. The method of Claim 4 further comprising:

using said hardware I/O control block upon said target address and said reconnecting target address being equal.

- 5        6. The method of Claim 4 further comprising:  
         changing said first portion of said hardware I/O control block array pointer upon said target address and said reconnecting target address being unequal.

- 10       7. The method of Claim 6 further comprising:  
         addressing another page in said plurality of pages of said hardware I/O control block array for said parallel SCSI host adapter using said first  
15       portion of said hardware I/O control block array pointer in said parallel SCSI host adapter wherein said another page includes a plurality of storage sites for hardware I/O control blocks.

- 20       8. The method of Claim 7 further comprising:  
         addressing a hardware I/O control block stored in said another page using said second portion of said hardware I/O control block array pointer in said parallel SCSI host adapter.

- 25       9. The method of Claim 8 further comprising:  
         comparing a target address stored in said hardware I/O control block stored in said another page with said reconnecting target address.

- 30       10. The method of Claim 9 further comprising:  
         using said hardware I/O control block stored in said another page upon said target address stored in said hardware I/O control block stored  
35       in said another page and said reconnecting target address being equal.

11. A method for accessing hardware I/O control blocks, which are stored in a hardware I/O control block array, by a parallel SCSI host adapter, said method comprising:
- storing hardware I/O control blocks for targets on a SCSI bus in a paged hardware I/O control block array; and
  - accessing one hardware I/O control block in said paged hardware I/O control block array addressed by a hardware I/O control block array pointer, wherein said hardware I/O control block array pointer includes a page identifier and a storage site identifier.
12. The method of Claim 11 wherein a first portion of said paged hardware I/O control block array pointer includes a page identifier, and said method further comprises:
- configuring said page identifier to identify a page in said paged hardware I/O control block array so that said paged hardware I/O control block array pointer addresses one hardware I/O control block page in said array.
13. The method of Claim 12 further comprising:
- loading a tag from a reconnecting target into said storage site identifier of said paged hardware I/O control block array pointer.
14. The method of Claim 13 further comprising:
- comparing a target address stored in said one hardware I/O control block with an address of said reconnecting target.
15. The method of Claim 14 further comprising:

using said hardware I/O control block upon said target address and said address of said reconnecting target being equal.

- 5           16. A system comprising:  
            a parallel SCSI host adapter comprising;  
            a sequencer; and  
            a paged hardware I/O control block array  
            pointer coupled to said sequencer; and  
10           a memory coupled to said paged hardware I/O  
            control block array pointer, and including a paged  
            hardware I/O control block array comprising:  
            a plurality of pages going from a lowest  
            page to a highest page, wherein each of said  
15           plurality of pages further comprises:  
            a plurality of hardware I/O control  
            block storage sites, wherein a number of  
            said hardware I/O control block storage  
            sites in said plurality of hardware I/O  
20           control block storage sites on at least  
            one of said plurality of pages is equal  
            to a number of unique tag values that  
            can be returned by a tagged queue SCSI  
            target reconnecting to said parallel  
25           SCSI host adapter.

17. The system of Claim 16 wherein said memory is external to said parallel SCSI host adapter.

- 30           18. The system of Claim 16 wherein said memory is  
            internal to said parallel SCSI host adapter.

19. A memory comprising:  
            an expanded SCSI control block array for a  
35           parallel SCSI host adapter, said expanded SCSI  
            control block array comprising:

a plurality of pages going from a lowest page to a highest page, wherein each page further comprises:

a plurality of SCSI control block storage sites,

wherein a number of SCSI control block storage sites in said plurality of SCSI control block storage sites on at least one of said plurality of pages is equal to a number of unique tag values that can be returned by a tagged queue SCSI target reconnecting to said parallel SCSI host adapter.